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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,816	01/31/2002	Satyanarayana Dharanipragada	YOR920000841US1 (8728-471)	5220
46069	7590	03/25/2005	EXAMINER	
F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797			ABEBE, DANIEL DEMELASH	
			ART UNIT	PAPER NUMBER
			2655	

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/062,816	Applicant(s) DHARANIPRAGADA ET AL.	
	Examiner Daniel D Abebe	Art Unit 2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9, 10 and 13-25 is/are allowed.
- 6) ☒ Claim(s) 1-8, 11 and 12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6-8 and 11-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Bahl et al. (5,182,773).

As to claim 6, Bahl teaches a method of extracting feature vectors, in pattern recognition, where the feature vectors are averaged (Col.9, lines 50-53; Col.10, lines 5-8).

As to claim 7, Bahl teaches where the pattern is speech pattern and the feature stream accordingly are cepstral vectors (Col.2, lines 58-60).

As to claim 8, Bahl's method is performed by a system comprising a program storage means (Fig.10).

With regard to claims 11-12, Bahl teaches where feature vectors (MFCC) computed from spectral envelope of multiple overlapping frames are averaged.

Claims 3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Hardwick (6,161,089).

As to claims 3 and 5, Hardwick teaches a method for estimating spectral parameters where the spectral envelope estimate is obtained from the mean value of two overlapping sub-frames (Fig.5; Fig.7, # 6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bahl as applied to claims 6-8 and 11-12 above, and further in view of Bhaskar et al. "MVDR BASED ALL-POLE MODELING" PROPERTIES, ENHANCEMENTT, AND COMPARISONS".

As to claims 1 and 2, Bahl teaches where feature vectors (cepstral vectors) are obtained from the spectral envelope, however, doesn't teach where the envelopes are obtained using MVDR. Bhaskar however teaches obtaining spectral envelop using MVDR. It would have been obvious to one of ordinary skill in the art to include MVDR in Bahl teaching in view of Bhaskar for providing high quality of spectral envelope modeling.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hardwick as applied to claims 3 and 5 above, and further in view of Bhaskar et al.

The step of obtaining is taught by Bhaskar and the motivation for introducing it in Hardwick is same as above.

Allowable Subject Matter

Claims 9-10 and 13-25 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: the claims are allowed, because, Bahl or the prior arts of record do not teach averaging the spectral envelope for smoothing where MFCC is computed from and in case of claims 13-25 obtaining the feature vectors according to the steps recited in claim 13.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mulla et al. (4,866,777).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel D Abebe whose telephone number is 703-308-5543. The examiner can normally be reached on monday-friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2655

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Abebe, Primary Examiner A.U. 2655

A handwritten signature in black ink, appearing to read 'Dan. Abebe', with a stylized, flowing script.

March 21, 2005